

Patent Claims

1. Arrangement (1) for controlling the torque of a drive unit (5) of a vehicle (35) comprising: first means (10), which determines a desired value for the torque to be outputted by the drive unit (5); second means (15), which adjusts the desired value while considering loads of the drive unit (5); this second means (15) correcting the torque, which is to be adjusted, in dependence upon the loss torques of the drive unit (5) and/or on the torque requirement of additional consumers which load the drive unit (5); characterized in that: the second means (15) weights first loss torques of the drive unit (5) and/or a first torque requirement of the additional consumers, which load the drive unit (5), in dependence upon motor rpm (20) and on idle rpm desired value of an idle rpm control (25) for correcting the torque to be adjusted but only when the time-dependent course of the first loss torques and/or of the first torque requirement is free of jumps during operation of the drive unit (5) or of the consumers.

2. Arrangement (1) of claim 1, characterized in that the second means (15) carries out the weighting by means of a quotient of the idle rpm desired value and the motor rpm (20).

3. Arrangement (1) of claim 2, characterized in that the second means (15) derives a weighting factor for the weighting from the quotient by means of a characteristic line (30).

4. Arrangement (1) of claim 1, 2 or 3, characterized in that the second means (15) additively considers the weighted first loss

torques and/or the weighted first torque requirement for correcting the torque to be adjusted.

5 5. Arrangement (1) of one of the above claims, characterized in that the second means (15) considers second loss torques of the drive unit (5) and/or a second torque requirement of the additional consumers, which load the drive unit, only additively to correct the torque to be adjusted when the time-dependent course of the second loss torques and/or of the second torque requirement is burdened with jumps during operation of the drive unit (5) or of the consumer, especially during shifting operations.

5 6. Arrangement (1) of claim 5, characterized in that the second loss torques include loss torques which occur, for example, during a switchover from homogeneous operation into a stratified charge operation in a drive unit (5) having direct injection including a spark-ignition engine.

7. Arrangement (1) of claim 5 or 6, characterized in that the second loss torques include loss torques which occur with a switchoff of individual cylinders and/or of individual valves of the drive unit (5).

Summary

An arrangement (1) for controlling the torque of a drive unit (5) of a vehicle is suggested which increases driving comfort. The arrangement includes first means (10) which
5 determines a desired value for the torque to be outputted by the drive unit (5). In addition, second means (15) are provided which adjusts the desired value while considering loads of the drive unit (5). This second means (15) corrects the torque, which is to be adjusted, in dependence upon the loss torques of
10 the drive unit (5) and/or on the torque requirement of additional consumers which load the drive unit (5). The second means (15) weights first loss torques of the drive unit (5) and/or a first torque requirement of the additional consumers, which load the drive unit (5), in dependence upon motor rpm (20) and on idle rpm
15 desired value of an idle rpm control (25) for correcting the torque to be adjusted but only when the time-dependent course of the first loss torques and/or of the first torque requirement is free of jumps during operation of the drive unit (5) or of the consumers.